RESOLUTION RECOGNIZING THE UNREINFORCED MASONRY BUILDING HAZARD IN UTAH

SPONSOR: UTAH LEGISLATURE
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Whereas the State of Utah is susceptible to powerful, damaging earthquakes;

Whereas the Federal Emergency Management Agency (FEMA) has ranked Utah sixth in projected annualized earthquake loss in the United States;

Whereas much of the existing building stock within the state was constructed under codes and standards that did not recognize this hazard;

Whereas more than eighty percent of the state's population is located in areas subject to large earthquakes;

Whereas a major seismic event will result in catastrophic loss of life, property, and business in the state;

Whereas one of the state's primary responsibilities is to safeguard the safety and welfare of its citizens;

Whereas unreinforced masonry buildings (URM's) are among the most dangerous structures in a strong earthquake;

Whereas there is a large, but unquantified, inventory of such URM buildings in seismically active areas; and

Whereas recognizing and anticipating future catastrophic events, and preparing for recovery from such events is in the best interest of the citizens and the state,

Now therefore, be it resolved that the Utah Seismic Safety Commission undertake to compile an inventory of URM's to quantify the extent of the problem in the state.

Be it further resolved that the Utah Seismic Safety Commission recommend priorities to address the problem in a manner that will most effectively protect the lives, property, and the economy of the state of Utah.

Be it further resolved that the Utah Seismic Safety Commission make recommendations for ameliorating the URM problem in the state.

Be it further resolved that copies of this resolution be sent to the Governor, the President of the Structural Engineers Association of Utah, and the President of the Utah Chapter of the American Institute of Architects.

Structural Licensing – Scope of Practice

An engineer shall be a registered structural engineer in the State of Utah to provide structural engineering services in the state for significant structures. Significant structures shall be defined as, but not limited to:

A) Buildings Representing A Substantial Hazard To Human Life

Buildings and other structures that represent a substantial hazard to human life in the event of failure include but are not limited to:

1) Buildings and other structures whose primary occupancy is public assembly with an occupant load greater than 300.
2) Buildings and other structures with elementary school, secondary school or day care facilities with an occupant load greater than 250.
3) Buildings and other structures with an occupant load greater than 500 for colleges or adult education facilities.
4) Health care facilities with an occupant load of 50 or more resident patients, but not having surgery or emergency treatment facilities.
5) Jails and detention facilities.
6) Any other occupancy with an occupant load greater than 5,000.
7) Power-generating stations, water treatment for potable water, waste water treatment facilities and other public utility facilities.
8) Buildings and other structures containing sufficient quantities of toxic or explosive substances to be dangerous to the public if released.

B) Essential Facilities

Buildings and other structures designated as essential facilities include but are not limited to:

1) Hospitals and other health care facilities having surgery or emergency treatment facilities.
2) Fire, rescue and police stations and emergency vehicle garages.
3) Designated earthquake, hurricane, or other emergency shelters.
4) Designated emergency preparedness, communication, and operation centers, and other facilities required for emergency response.
5) Power-generating stations and other public utility facilities required as emergency backup facilities.
6) Structures containing highly toxic materials as defined by the adopted building code where the quantity of the material exceeds the maximum allowable quantities indicated in the adopted building code.
7) Aviation control towers, air traffic control centers and emergency aircraft hangars.
8) Buildings and other structures having critical national defense functions.
9) Water treatment facilities required to maintain water pressure for fire suppression.

C) Buildings and Structures Requiring Special Consideration

Buildings and structures requiring special design considerations include but are not limited to:

1) Structures that are normally occupied by human beings that are five stories or more in height, or more than 60 feet above the average ground level measured at the perimeter of the structure.
2) All buildings over 60,000 aggregate gross square feet in area.

Exempt Structures and Buildings

Exempt buildings and structures include:

1) Buildings and structures that represent a low hazard to human life, including but not limited to:
   a) Agricultural facilities
   b) Temporary facilities with a floor area less than 20,000 square feet.
   c) Minor storage facilities
2) Residential buildings including:
   a) Single family residence
3) Light framed one and two story residential buildings
4) Bridges

Utah School Seismic Hazard Inventory

Purpose: Perform a rapid visual screening for seismic hazards of Utah educational facilities using *FEMA 154: Rapid Visual Screening of Buildings for Potential Seismic Hazards: A Handbook, 2nd Edition.* With this information, rank Utah educational facilities for seismic hazard.

1. Funding
    a. Legislature shall authorize $500,000 in one-time funds for Rapid Visual Screening (RVS) of Utah's K-12 Educational Facilities. These funds shall be administered by the Utah State Office of Education (USOE).
    b. Each district and charter school shall perform the evaluations on their facilities and then request re-imbursement from the authorized funds. Funds shall be reimbursed when the USOE receives the evaluation data outlined under section 2.
    c. All initial screenings shall be complete within 24 months.
        i. Any money not allocated after 18 months may be used for a more detailed evaluation of individual buildings using a nationally recognized existing building evaluation or retrofit standard. The standard must be approved by the Rapid Visual Screening Advisory Committee (RVSAC)
            1. The Utah Office of Education shall prioritize which buildings require additional evaluation with the aid of the RVSAC. The USOE may, at its discretion, require matching funds from the district to complete the detailed evaluation.
            2. Any money not under contract after 21 months will return to the general fund.
            3. Secondary evaluations shall be completed and reported to the legislature in the final report.
        ii. If the money is insufficient to complete an initial screening, this bill can be re-authorized by the state for any appropriate additional funding. Funding levels should be reviewed by the USOE at 12 months after initial authorization. Any additional funding requests shall be presented to the state legislature.
2. Task
    a. Perform a Rapid Visual Screening of all K-12 Utah Educational Buildings (including public education and charter schools) in accordance with *FEMA 154: Rapid Visual Screening of Buildings for Potential Seismic Hazards: A Handbook, 2nd Edition 2002.* All reports shall, as a minimum, complete a scoring sheet in Appendix B of *FEMA 154.*
    b. The USOE, with the aid of the RVSAC, shall establish a "cut score" for the state prior to beginning screening.
    c. All scoring shall be supervised or performed by a licensed Professional Structural Engineer or licensed Professional Civil Engineer with experience in seismic evaluations.
    d. Each district shall aggregate the findings and report to the USOE. At a minimum, each district report to the USOE shall include:

i. The RVS scoring sheet from each building
ii. The current number of estimated occupants in the building
iii. The square footage of each building

e. The USOE shall make a final report to the legislature of statewide findings 24 months after authorization at the latest. This report shall include:
   i. Summary of findings by district which shall include:
      1. Total number of screened buildings and score for each building.
      2. Total number of estimated actual occupants and number of housed occupants below the cut score.
      3. Total number of screened facility square footage and square footage below the cut score.
      4. Number of districts and facilities without any reporting.

3. Rapid Visual Screening Advisory Committee
   a. The committee shall consist of the following individuals:
      i. (3) Utah Licensed Structural Engineers, one selected by each of the following organizations:
         1. Utah Seismic Safety Commission
         2. Utah Division of Facilities and Construction Management
         3. Structural Engineers Association of Utah
      ii. (3) Representatives residing in school districts throughout the state selected by the USOE. As closely as possible, these individuals should represent:
         1. Large metropolitan districts
         2. Medium sized outlying districts
         3. Smaller rural districts
      iii. An individual representative from the Utah Legislature
   b. The committee shall meet within 30 days after this bill is authorized and set the cut score for this inventory. The cut score shall be reported to the USOE and not made public until the final report is assembled by the USOE.
   c. After setting the cut score, the committee shall meet as deemed necessary by its own judgment or at the request of the USOE.